

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
10 February 2005 (10.02.2005)

PCT

(10) International Publication Number  
**WO 2005/011359 A1**

- (51) International Patent Classification<sup>7</sup>: **A01G**
- (21) International Application Number:  
PCT/IL2004/000673
- (22) International Filing Date: 22 July 2004 (22.07.2004)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:  
157246 5 August 2003 (05.08.2003) IL
- (71) Applicant (for all designated States except US):  
**NAAAN-DAN IRRIGATION SYSTEMS (C.S.) LTD.**  
[IL/IL]; Kibbutz Na'an, 76829 Na'an (IL).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **KATZMAN, Zohar**

[IL/IL]; Rubinstein Street, 34987 Haifa (IL). **KATZMAN, Oded** [IL/IL]; 3 Greenbaum Street Denia, 34987 Haifa (IL).

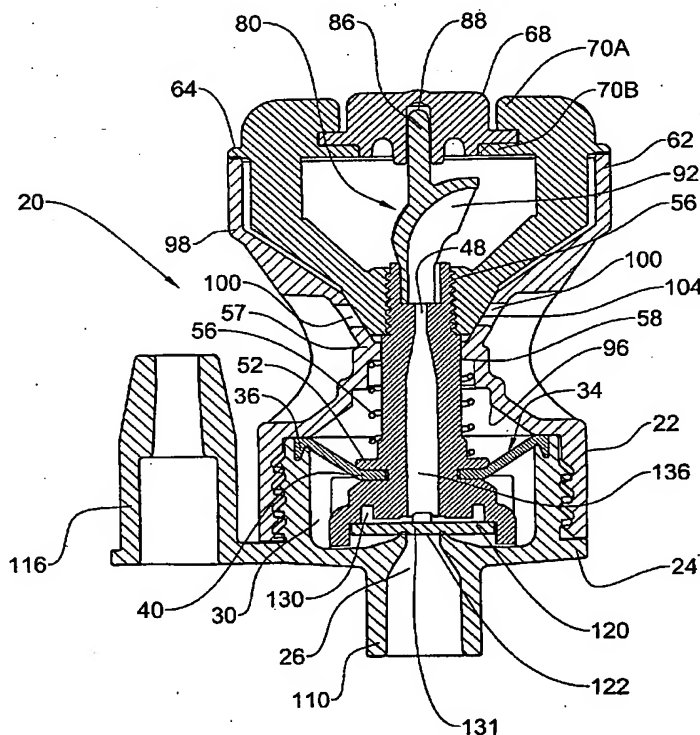
(74) Agent: **REINHOLD COHN AND PARTNERS; P.O.**  
Box 4060, 61040 Tel Aviv (IL).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,

[Continued on next page]

(54) Title: **POP-UP SPRINKLER**



(57) Abstract: A sprinkler comprising a housing fitted with an inlet port connectable to a water supply line and extending into an inlet chamber, a hollow stem member with an inlet end thereof being in flow communication with said inlet chamber and an outlet end thereof being in flow communication with an irrigation head, a diaphragm seal sealingly fixed at peripheral boundaries thereof to the housing and sealingly articulated to the stem member and supporting it at an essentially upright position. The diaphragm is deformable between a first position in which the irrigation head is retracted within the housing and a second position in which the irrigation head projects from the housing.

WO 2005/011359 A1



ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),  
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,  
FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI,  
SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,  
GW, ML, MR, NE, SN, TD, TG).

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

**Published:**

— with international search report